Moderating Effect of Corporate Governance Mechanism on the Relationship between Firm Attributes and Corporate Performance in Emerging Economy

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Abstract

The study examined the moderating effect of corporate governance mechanism on the relationship between firm attributes and corporate performance in emerging economy. Firm attributes was proxy using firm assets tangibility (FAT) and firm foreign listing (FFL); corporate performance was measured using Tobin's Q while the moderating variable of corporate governance mechanism was proxy using board size. The ex post facto design was adopted and the data for the study was collected from the annual reports and accounts of the 66 manufacturing companies listed under consumer goods sector, industrial goods sector oil & gas sector, ICT sector, healthcare sector and conglomerate sector of the Nigeria Exchange Group (NGX) as of December 31, 2022 for the period of 2016-2022. Panel Least squares model was used in the data analysis and the results of the study show a significant and positive association between firm assets tangibility, firm foreign listing and performance of listed manufacturing firms in Nigeria at 1% significant level. Corporate governance mechanism was also found to moderate the relationship between the firm assets tangibility, firm foreign listing and corporate performance at 1%-5% level of significance. The study therefore concludes that firm attributes ensure corporate performance. The study recommends that firms should find a way to ensure an optimal use of their tangible assets and also have a foreign stock listing as it ensures corporate performance. In addition, firms should ensure that they have effective corporate governance mechanism in place as it moderates the relationship between firm attributes and corporate performance.

Keyword: Firm Attributes; Firm Assets Tangibility; Firm Foreign Listing; Board Size; Corporate Governance Mechanism

Introduction

Today’s dynamic business environment is characterized by the emergence of increasingly knowledge-based economies that encourage both global competition and innovative business practices. This is at the core of any competitive advantage today. Hence, corporate governance has attracted the attention of many researchers, investors, managers, policy makers and even potential investors as an appropriate governance mechanism needs to be incorporated to ensure that the organization functions well and also meets the needs of its various stakeholders. This is due to the high number of corporate failures in recent years, particularly in Nigerian industry. Many companies have failed because they did not follow or value the concept of corporate governance (Okpala & Omaliko, 2022).

According to Ndidi (2017), many authorities agree that corporate performance will improve significantly when corporate governance is practiced appropriately. Good corporate governance practices have become a global effort to stabilize and strengthen global capital markets and protect investors.

A number of studies have been conducted to examine the relationship between firm attributes and performance in both developed and emerging economies. i.e Lambe, Arumona and Okoli (2023), Efuntade and Akinola (2020), Egbunike and Okerekeoti (2018); Waweru and Riro
(2013), Maleya and Willy (2013), Shehu and Bello (2013), Hassan and Ahmed (2012), Margaritis and Psillaki (2010), etc. Thus, it was observed from the literature that most studies on firm attributes, have a focus on the following measurements; company size, company debt, company age, company liquidity, company growth, company ownership, etc. None of the studies introduced firm foreign listing and firm assets tangibility as a measure for firm attributes. A foreign-listed company seeks to enhance its global reputation and attract international investors by listing its shares on a foreign stock exchange. It also increases company visibility and value and reduces information asymmetry. On the other hand, companies with high asset tangibility ratio have lower financial distress costs than companies with a low asset tangibility ratio. Therefore, there is a need to introduce these variables (firm foreign listing and firm assets tangibility) in order to examine its relationship with company performance.

Also, previous studies show deficiency in the factors that influence company performance. Some of these studies have focused on just one or a few factors, such as capital structure, while others only used accounting measures of company performance. Furthermore, to the best of our knowledge, none of the studies distinguishes between firm attributes and corporate governance mechanisms. In Nigeria, little or very limited research has been conducted to provide evidence of the relationship between firm attributes and corporate performance, using corporate governance as a mediating variable. Hence, the need for the present study to examine the relationship between firm attributes and corporate performance while controlling for corporate governance mechanisms in Nigeria. Consequently, the present study attempts to fill the gap that exists in previous research.

To this end, we formulated the following hypotheses to achieve the objectives of this study.

**H01**: Firm assets tangibility has no significant relationship with corporate performance

**H02**: There is no significant relationship between firm foreign listing and corporate performance

**H03**: Corporate governance mechanism does not moderate the relationship between firm assets tangibility and corporate performance

### Review of Related Literature

#### Firm Attributes

Company attributes are factors that are largely under the control of management. It includes company size, liquidity, firm age, leverage and revenue growth. On the other hand, the macroeconomic indicators are such factors that are beyond management's control. These include interest rate, GDP and industry size (Sumaira & Amjad, 2013). Ali and Isa (2018) defined firm attributes as the distinctive features that distinguish one firm from another. It is possible to identify the characteristics of the company from the relevant information in the financial statements for a given accounting period (Stainer, 2006). According to Shehu and Bello (2013), firm attributes refer to the characteristics possessed by a particular company that defines its activities. It is composed of those variables that relatively influence company decisions extensively.

#### Firm Assets Tangibility

According to Salah, Mohamed and Rania (2020), assets tangibility is a physical property that could be touched. The term is most commonly associated with fixed assets such as machinery, vehicles and buildings. It is not used to describe short-term assets such as inventory, as these items are intended for sale or conversion into cash. Tangible assets represent the key competitive advantage of some companies, especially when they use the assets efficiently to generate sales. Tangible assets are physical and measurable assets used in a company's business operations. Assets such as property, plant and equipment are tangible assets. Tangible assets form the backbone of a company's operations by providing the means by which companies produce their goods and services. The physical value of assets is defined as the ratio of total tangible assets to the book value of total assets (Hall, 2012).

#### Firm Foreign Listing

Sudipa (2007) notes that listing companies abroad provides an increasing opportunity to sell products and services and raise capital in foreign markets. Large, medium and even small companies are weighing the
benefits and costs of listing abroad. Access to foreign capital is a key benefit. A foreign listing is a company's ability to enhance its global reputation and attract international investors by listing its shares on a foreign stock exchange. In theory, foreign listing increases company visibility and value and reduces information asymmetry. The cost of capital of foreign listed companies could decrease due to transaction costs reduction, improving the quality of information available to investors, taking advantage of tax benefits and opening up more markets, which will be reflected in the profitability of the company (Gary & Shahrockh, 1991).

Corporate Governance Mechanism

According to Okpala and Omaliko (2022), corporate governance mechanism is viewed as the delegated responsibility of the board of directors in running the organization and also has the responsibility to ensure that those investing in the company can generate a return on their investment. Therefore, the Board of Directors has a legal mandate to protect the rights of investors and their shareholders. Corporate Governance (CG) in a corporate structure leads to maximizing shareholder value on a legal, ethical and sustainable basis, while ensuring equity and transparency for all stakeholders (the company's customers, employees, investors, supplier partners, and the government). Corporate governance is a key to transparent corporate disclosure and quality accounting practices (Abdullah, 2014).

Ogundele (2005) argues that corporate governance is viewed as the body of small or large organizations or even large society that bears the responsibility for controlling resources of all kinds within its sphere of influence and also has the power to rule over the human and material resources of the organization or community. According to Donaldson and Davis (2003), corporate governance is a system by which an entity is controlled. It relates to the workings of the company's board of directors and the conduct of business externally and internally.

For the purpose of this study, corporate governance mechanism was used as a moderating variable and proxy using board size.

Corporate Performance

Omaliko, Mordi and Aluoreronye (2022), note that firm performance is a measure of a firm's ability to utilize assets from its core business and generate revenue. The term performance, is used to assess a company's financial health over a period of time and could be used to compare similar companies in the same industry. It is a measure of the monetary results of a company's operations and policies. These are evident in the company's return on assets, return on investments, value added, net assets per share, etc.

Ndidi (2017) notes that financial performance, which assesses the company's achievement of its economic objectives, has long been a topic of interest in management research. The study finds that a company's financial performance is related to various subjective measures of how well a company can use its existing primary operating assets to generate profits.

For the purpose of this study, a market-based measure of Tobin’s Q (TQ) was used as a measurement for corporate performance as used in the study of (Omaliko & Okpala, 2022).

**Figure 1:** The Diagram of Conceptual Model

![Diagram of Conceptual Model](image-url)

**Source:** Researcher’s Concept (2023)
Theoretical Framework

Stakeholders Theory

Freeman propounded the stewardship theory in 1984. The theory is based on the assumption that shareholders' interests and management's interests are aligned; therefore, management is motivated to make decisions that maximize the organization's performance and overall value. The theory posits that cooperative behavior has greater utility than individualistic behavior and that management's actions would serve to maximize shareholders' wealth while also satisfying their personal needs. Managers protect and maximize shareholder wealth through the organization's performance, as this maximizes its utility functions (Omaliko & Okpala, 2022).

To achieve this goal congruently, shareholders must put in place appropriate, enabling governance structures and mechanisms, as well as information and authority to allow management autonomy to make decisions that maximize their utility in achieving organizational and non-interested goals. Chief Executive Officers (CEOs) who act as administrators are best facilitated in their pro-organizational actions when corporate governance structures allow them high levels of authority and discretion (Davis, Schoorman, & Donaldson, 1997). Therefore, the evidence from stakeholder’s theory linking corporate governance mechanism to improved financial performance is very evident. Therefore, the study is anchored on the stakeholder theory.

Empirical Review

Efuntade and Akinola (2020) examined the influence of company characteristics on the financial performance of listed manufacturing companies in Nigeria. Descriptive and cross-sectional research designs were applied to examine the relationship between company characteristics variables and financial performance of listed manufacturing companies in Nigeria over a 14-year period. Secondary data was obtained from annual reports of five selected publicly traded manufacturing companies. To test the formulated hypothesis, the panel least squares regression model was used. The results showed that all independent variables collectively have a strong impact on the financial performance of manufacturing companies in Nigeria as measured by return on investment. It was concluded that the explanatory variables (firm age, firm size, revenue growth, liquidity and leverage) are significantly related to the dependent variable (return on asset). The study then recommends that the management should find ways to improve and make the best use of their assets while making maximum use of their resources during the production processes and distribution of the finished products, as thus ensures performance.

Lambe, Arumona, and Okoli (2023) examined company characteristics and social sustainability reporting using an ex post facto research design, a non-probable (targeted) sampling technique, and a panel regression estimation, relying on annual reports (secondary data) from companies 112 companies covering the period of 2012 to 2021, from which 82 companies were selected. A Hausman test (random effect) was also performed using E-Views. The results of the study show that company size has a positive but significant impact on the Social Disclosure Index, while company age has a positive and negligible effect on the Social Disclosure Index of non-financial companies in Nigeria. According to the results, the social sustainability reporting of listed non-financial companies in Nigeria is significantly influenced by the performance characteristics of the companies. Therefore, the study recommends that the management of non-financial companies should increase the size of their companies relative to total assets, as this has a positive multiplier effect on the company's social sustainability reporting.

Waweru and Riro (2013) examined revenue management and company characteristics based on 37 listed companies in Kenya for the five-year period 2016 to 2010 and applying the accounting approach to measure revenue management. The study posits that the quality of financial reporting of companies that are not highly aligned and compromised. They therefore concluded that investors are more likely to rely on the financial reports of companies with lower debt-to-equity ratios.

Hassan and Ahmed (2012) examined the corporate characteristics and earnings quality of listed oil and gas companies in Nigeria for the period 2007–2011. The oil and gas companies listed are nine (9), from which a sample of seven (7) was used for the study. Firm attributes as an independent variable were an indicator of firm size, leverage, institutional ownership, profitability, liquidity, and firm growth, while residuals from the modified Jones model were used as an indicator of earnings quality. The study uses multiple panel regression techniques and data was collected from secondary sources through the companies’ annual reports and financial
statements. Findings showed that leverage, liquidity and corporate growth have a significant and positive impact on earnings quality, while company size, institutional ownership and profitability have a significant but negative impact on earnings quality for listed oil and gas companies in Nigeria.

Maleya and Willy (2013) examined the factors affecting the financial performance of listed companies on the Nairobi Securities Exchange in Kenya. This was influenced by trade-off and agency theories. The study is based on an explanatory research design and 29 listed companies that regularly traded on the Nairobi Stock Exchange in the period 2006-2012 were surveyed. The analysis of the data from the financial statements was based on a number of basic statistical techniques. Descriptive statistics, Pearson correlation and multiple regression were used to analyze the data. Their results showed that leverage had a significant and negative impact on financial performance, while liquidity, firm size, and age had significant and positive impacts on financial performance.

Methodology

An ex post facto design was used in the study. This was based on the fact that secondary data was used which already exist and cannot be controlled. The study population consists of all 66 manufacturing companies listed under consumer goods sector, industrial goods sector, oil & gas sector, ICT sector, health care sector and conglomerate sector of the Nigeria Exchange Group as of December 31, 2022 covering the period 2016-2022. The use of firms quoted under the selected sectors on NGX Group could be justified by the fact that, to the best of our knowledge, there is no study that had focused on these sectors in assessing the moderating effect of corporate governance mechanism on the relationship between firm attributes and corporate performance. Of the 66 companies that made up the study population, 16 had incomplete financial information required during the reporting period and were removed. On this basis, a total of 50 companies formed our sample size with 350 observations. The data was collected from the annual accounts and annual accounts of the sampled companies. Panel least squares model was used to study the relationship between firm attributes and corporate performance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent</td>
<td></td>
</tr>
<tr>
<td>Corporate Performance</td>
<td>Tobin’s Q = Market Value of Physical Assets/Replacement Value</td>
</tr>
<tr>
<td>Independent</td>
<td></td>
</tr>
<tr>
<td>Firm Assets Tangibility</td>
<td>Firm Tangible Assets/Total Assets</td>
</tr>
<tr>
<td>Firm Foreign Listing</td>
<td>A dummy variable of 1 for foreign listing otherwise 0</td>
</tr>
<tr>
<td>Moderating</td>
<td></td>
</tr>
<tr>
<td>Corporate Governance Mechanism</td>
<td>Board Size = Number of directors in the board</td>
</tr>
</tbody>
</table>

Source: Empirical Survey (2023)

Model Specification and Justification

In line with the previous researches, the researcher designed a model to examine the relationship between firm attributes and corporate performance; moderated by corporate governance mechanism. The functional model for the study is shown below as thus:

\[ TQ = F(FAT, FFL) \]

The explicit form of the regression designed for the study is expressed as thus:

**Model 1:** \( TQ_{it} = \beta_0 + \beta_1FAT_{it} + \beta_2FFL_{it} + \mu \)

To examine the moderating effect of corporate governance mechanism on the relationship between firm attributes and corporate performance, the regression model is expressed as thus:

**Model 2:** \( TQ_{it} = \beta_0 + \beta_1FAT_{it} + \beta_2FFL_{it} + \beta_3BS_{it} + \beta_4BS \times FAT_{it} + \beta_5BS \times FFL_{it} + \mu \)

Where:

- \( TQ = \) Tobin’s Q
- \( FAT = \) Firm Assets Tangibility
- \( FFL = \) Firm Foreign Listing
- \( BS = \) Board Size
- \( \mu = \) error term

\[ \text{Panel least squares model was used to study the relationship between firm attributes and corporate performance.} \]
**Decision Rule:** accept $H_0$ if P-value > 1% or 5% significant level otherwise reject $H_0$

**Data Analysis and Results**

**Table 2: Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>TQ</th>
<th>FAT</th>
<th>FFL</th>
<th>BS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.228234</td>
<td>3.263429</td>
<td>2.674571</td>
<td>2.055657</td>
</tr>
<tr>
<td>Median</td>
<td>0.074000</td>
<td>3.100000</td>
<td>2.900000</td>
<td>2.120000</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.967000</td>
<td>4.500000</td>
<td>4.100000</td>
<td>3.500000</td>
</tr>
<tr>
<td>Minimum</td>
<td>-41.98500</td>
<td>1.800000</td>
<td>1.400000</td>
<td>0.800000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>3.931154</td>
<td>0.678596</td>
<td>0.666221</td>
<td>0.577946</td>
</tr>
<tr>
<td>Skewness</td>
<td>-10.28852</td>
<td>0.432456</td>
<td>-0.619862</td>
<td>-0.246264</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>109.7756</td>
<td>2.251856</td>
<td>2.095932</td>
<td>2.451261</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>172439.9</td>
<td>19.07195</td>
<td>34.33285</td>
<td>7.928931</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000*</td>
<td>0.000072*</td>
<td>0.000000*</td>
<td>0.018978**</td>
</tr>
<tr>
<td>Sum</td>
<td>-79.88200</td>
<td>1142.200</td>
<td>936.1000</td>
<td>719.4800</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>5393.436</td>
<td>160.7119</td>
<td>154.9037</td>
<td>116.5734</td>
</tr>
</tbody>
</table>

**Note:** *1%, **5% Level of Significance**

**Source:** E-View 12 Computational Results (2023)

Table 2 above shows that Tobin’s Q (TQ) mean value for the sampled companies was 0.228234. This implies that the financial performance of firms is determined by its attributes. The maximum value for the study was 4.967 and the minimum value was -41.99. The differences in the maximum and minimum TQ values between the sampled companies justify the need for the study as we assume that a firm's attributes is a determinant of its performance. The average value of firm assets tangibility (FAT) for the sampled companies was 3.263429. This means that companies with FAT value of 3.263429 and above are companies with physical assets at a risk level of 0.68%. The maximum and minimum values for the study were 4,500 and 1,800 respectively. The variability in minimum and maximum FAT values between the sampled companies justifies the need for this study, as the study assumes that companies with such variability have more physical assets.

The average firm foreign listing (FFL) value for the sampled companies was 2.674571. This means that companies with FFL values of 2.674571 and above are foreign listed companies. Therefore, such a company tries to increase its global reputation and attract international investors by listing its shares on a foreign stock exchange. The maximum and minimum values for the study were 4,100 and 1,400 respectively. The variability in the minimum and maximum FFL values between the sampled companies justifies the need for this study, as the study assumes that companies with such variability have foreign listed shares.

The mean value of board size (BS) for the sampled companies was 2.055657. This implies that the corporate governance mechanism proxy as a board size (BS) determines corporate performance at a risk of 0.58%. The maximum and minimum values for the study were 3,500 and 0.800 respectively. The variability in maximum and minimum BS scores between sampled companies justifies the need for this study, as the study assumes that companies with such variability have effective corporate governance mechanisms in place.

Finally, in table 2 above, the Jarque-Bera (JB), which checks for normality of data shows that the data are normally distributed at the 1% level of significance but with exception to board size, which was typically distributed at 5% level of significant. Thus implies that the data is free from the presence of an unknown outlier. Therefore, least squares regression estimates can be used to estimate the analysis.
Table 3: Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>TQ</th>
<th>FAT</th>
<th>FFL</th>
<th>BS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TQ</td>
<td>1.000</td>
<td>0.061</td>
<td>0.02050</td>
<td>0.00536</td>
</tr>
<tr>
<td>FAT</td>
<td>0.061</td>
<td>1.000</td>
<td>0.548</td>
<td>0.062</td>
</tr>
<tr>
<td>FFL</td>
<td>0.02050</td>
<td>0.548</td>
<td>1.000</td>
<td>0.522</td>
</tr>
<tr>
<td>BS</td>
<td>0.00536</td>
<td>0.062</td>
<td>0.522</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Result Output from E-Views 12 (2023)

Table 3 above shows the relationship between the independent variables and dependent variable used in the model. It shows that all independent variables have a positive relationship with the dependent variable (TQ) and with each other. The values on the diagonal are all 1, indicating that each variable perfectly correlated with itself. When testing for multi-collinearity, we found that no two exogenous variables were perfectly correlated. Thus implies that there is no multi-collinearity in our model.

Test of Hypothesis

The R-squared for the model, shown in Table 4 above was 0.51%, indicating that the variables included in the model accounted for 51% of the change in the dependent variable of corporate performance (TQ), while about 49% remains unaccounted for. The F-statistic value of 6.988 and its P-value of 0.0000 indicates that the panel least-squares model is statistically significant at the 1% level. This implies that the regression model is valid and fitted for the study. Firm asset tangibility (FAT) and foreign firm listings (FFL) were found to have a positive and significant association with firm performance.

Autocorrelation test: The DW statistic is 1.979885, which is approximately 2, which agrees with Durbin Watson's rule of thumb. This means that the data is free from autocorrelation and suitable for the interpretation of the panel least-squares model result. The Schwarz criterion and Akika info criterion of 5.619029 and 5.585961 respectively; further strengthen the reliability of our result as it confirms the goodness of fit of the model.

Table 4: Panel Least Square Result on the Relationship between Firm Attributes and Corporate Performance for Model 1 (Direct Effect)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAT</td>
<td>0.417579</td>
<td>0.037104</td>
<td>11.25429</td>
<td>0.0001</td>
</tr>
<tr>
<td>FFL</td>
<td>0.112101</td>
<td>0.037794</td>
<td>2.966106</td>
<td>0.0397</td>
</tr>
<tr>
<td>C</td>
<td>1.291153</td>
<td>0.091138</td>
<td>14.16702</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

R-squared 0.508724  Mean dependent var 23.09837
Adjusted R-squared 0.500983  S.D. dependent var 3.931154
S.E. of regression 3.934464  Akaike info criterion 5.585961
Sum squared resid 5371.561  Schwarz criterion 5.619029
Log likelihood -974.5431  Hannan-Quinn criter. 5.599123
F-statistic 6.987633  Durbin-Watson stat 1.979885
Prob(F-statistic) 0.000000

Source: Result Output from E-Views 12 (2023)
Table 5: Panel Least Square Result on the Relationship between Firm Attributes and Corporate Performance Moderated by Corporate Governance Mechanism for Model 2 (Moderation Effect)

Dependent Variable: TQ  
Method: Panel Least Squares  
Date: 05/15/23  Time: 6:02  
Sample: 2016 2022  
Periods included: 7  
Cross-sections included: 50  
Total panel (balanced) observations: 350

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAT</td>
<td>0.497757</td>
<td>0.041121</td>
<td>12.10469</td>
<td>0.0000</td>
</tr>
<tr>
<td>FFL</td>
<td>0.242423</td>
<td>0.047409</td>
<td>5.113356</td>
<td>0.0019</td>
</tr>
<tr>
<td>BS</td>
<td>0.102829</td>
<td>0.024704</td>
<td>4.140187</td>
<td>0.0480</td>
</tr>
<tr>
<td>BS*FAT</td>
<td>0.819094</td>
<td>0.162459</td>
<td>5.041832</td>
<td>0.0049</td>
</tr>
<tr>
<td>BS*FFL</td>
<td>0.918800</td>
<td>0.207041</td>
<td>4.437768</td>
<td>0.0294</td>
</tr>
<tr>
<td>C</td>
<td>1.761442</td>
<td>0.312156</td>
<td>5.642826</td>
<td>0.0005</td>
</tr>
</tbody>
</table>

R-squared         0.747708 Mean dependent var  22.82347  
Adjusted R-squared 0.694987 S.D. dependent var  3.931154  
S.E. of regression 3.944789 Akaike info criterion  5.599662  
Sum squared resid  5353.108 Schwarz criterion  5.665798  
Log likelihood     -973.9409 Hannan-Quinn criter.  5.625987  
F-statistic        10.86784 Durbin-Watson stat  1.958230  
Prob(F-statistic)  0.000000

Source: Result Output from E-Views 12 (2023)
The R-squared for the model, as shown in Table 5 above, was 0.75%, indicating that the variables considered in the model accounted for 75% of the change in the dependent variable of firm performance (TQ), while 25% was not explained in the model. The F-statistic value of 10.87 and its P-value of 0.0000 indicates that the panel least-squares model is statistically significant at 1% level. This shows that the regression model is valid and fitted for the study.

Autocorrelation test: The DW statistic is 1.958230, which is approximately 2, which agrees with Durbin Watson's rule of thumb. This means that our data is free from autocorrelation and suitable for the interpretation of the panel least-squares model result. The Schwarz criterion and Akaike info criterion of 5.665798 and 5.599662 respectively further strengthen the reliability of our result as it confirms the goodness of fit of the model.

Discussion of Findings

In addition to the above, the specific results for each explanatory variable from the panel least square model as shown in Table 5 are provided below as follows:

H0: Firm assets tangibility has no significant relationship with corporate performance corporate performance
This hypothesis was tested and the result of the panel’s least squares model, as shown in Table 5, shows that the relationship between firm assets tangibility (FAT) and corporate performance (TQ) is positive and significant, with a P-value of 0.0000 for the model, which is below the assumed 1% significant level. The result of the positive coefficient of 0.498 for the model also implies that increase in firm’s tangible assets increases firm performance by 49.8%. We therefore accepted the alternate hypothesis, which states that firm assets tangibility has significant relationship with corporate performance. This finding seems agreeable with the findings of Efuntade and Akinola (2020), Lambe, Arumona, and Okoli (2023) who found that firm assets size determines firm performance. This goes further to confirm that firm assets tangibility increases corporate performance.

**H0**: There is no significant relationship between firm foreign listing and corporate performance

This hypothesis was tested and the result of the panel’s least squares model, as shown in Table 5, shows that the relationship between firm foreign listing (FFL) and corporate performance (TQ) is positive and significant, with a P-value of 0.0019 for the model which is less than 1% significant level. In addition, the positive coefficient of 0.242 for the model shows that the firm foreign listing ensures corporate performance by 24.2%. We therefore accepted the alternate hypothesis, which states that there is a significant relationship between firm foreign and corporate performance. This finding is in consonance with the a priori expectations of Sudipa (2007) and Gary and Shahrockh (1991) who found that foreign listing ensures firm performance. This goes further to confirm that firm foreign listing enhance its global reputation and attract international investors.

**H0**: Corporate governance mechanism does not moderate the relationship between firm assets tangibility and corporate performance

This hypothesis was tested and the result of the panel’s least squares model, as shown in Table 5, shows that the relationship between firm assets tangibility (FAT) and corporate performance moderated by corporate governance mechanism is positive and significant, with a P-value of 0.0049 for the model, which is below the assumed significance level of 1%. In addition, the positive coefficient of 0.819 for the model indicates that companies with effective corporate governance practices have higher performance. We therefore rejected the null hypothesis and accepted the alternate hypothesis, which states that corporate governance moderates the relationship between a firm tangible assets and corporate performance. Then finding agrees with the findings of Okpala and Omaliko (2022) and Ndidi (2017) who reported that corporate governance mechanism ensures corporate performance. This goes further to confirm that firms with effective corporate governance practices have higher returns.

**H0**: Corporate governance mechanism does not moderate the relationship between firm foreign listing and corporate performance

This hypothesis was tested and the result of the least squares model, as shown in Table 5, shows that the relationship between firm foreign listing (FFL) and corporate performance (TQ), moderated by corporate governance mechanism, is positive and significant with a P-value of 0.02941 for the model, which is below the assumed 5% level of significance. The result of the positive coefficient of 0.919 for the model also shows that effective corporate governance practices ensure firm foreign listing. We therefore accepted the alternate hypothesis, which states that corporate governance mechanism moderates the relationship between firm foreign listing and corporate performance.

Also, board size when independently tested as a control variable indicates a positive and significant relationship with corporate performance. With a p-value of 0.0480, the test is considered statistically significant at the 5% level.

**Conclusion**

The study concludes that firms’ attributes ensure corporate performance. Hence, corporate performance is a determinant of firm attributes. Also firm’s effective corporate governance practice moderates the relationship between firm’s attributes and corporate performance.

**Recommendation**

1. Firms should find a way to ensure optimal use of their tangible assets while making use of their resources during the production processes and also distribution of their
finished products, as this would help them in improving their performance.

2. The study, which found a link between firm foreign listing and corporate performance, suggests that foreign listing should be considered as an option for ensuring corporate performance.

3. Firms should also ensure that they have an effective corporate governance mechanism in place as this moderates the relationship between firm attributes and corporate performance.

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Conflict of Interest

Authors have declared that no competing interests exist.

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